

PATENT APPLICATION

**CERTIFICATE OF MAILING/FACSIMILE TRANSMISSION (37 CFR 1.8)**

I hereby certify that this paper (along with any paper referred to as being transmitted therewith) is being deposited with the United States Postal Service in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box. 1450, Alexandria, Virginia 22313-1450 on the date shown below as EXPRESS MAIL POST OFFICE TO ADDRESSEE, MAILING LABEL NO. EV 540353438 US.

Maria T. Sanchez  
(Print Name)

Date: June 17, 2005

Maria T. Sanchez  
(Signature)

Docket No. 2004US301

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Yu SUI et al.

Art Unit: 1756

Serial No. 10/808,884, filed March 25, 2004      Examiner: To be Assigned

For: POSITIVE-WORKING PHOTOIMAGEABLE BOTTOM ANTIREFLECTIVE  
COATING

**INFORMATION DISCLOSURE STATEMENT WITHIN THREE MONTHS OF FILING  
OR BEFORE MAILING OF THE FIRST OFFICE ACTION  
(37 CFR 1.97 (b))**

June 17, 2005

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

EXPRESS MAIL MAILING LABEL NO. EV 540353438 US

Dear Sir:

1. IDENTIFICATION OF TIME OF FILING INFORMATION DISCLOSURE STATEMENT

The information disclosure statement submitted herewith is being filed within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of a first Office action on the merits, whichever event occurs last. 37 CFR 1.97(b).

2. PRELIMINARY STATEMENTS

Applicants submit herewith patents, publications or other information of which they are aware, which they believe may be material to the examination of this application and in respect of which there may be a duty to disclose.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 CFR 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13-25, at 25.

Pursuant to the notice in the Official Gazette notice of 5 August 2003, 1276 O.G. 55, copies of US Patents and/or US Patent Publications are not being enclosed as the present application has a filing date after June 30, 2003.

3. COMPLETED FORM PTO-1449 IS ATTACHED.

4. IDENTIFICATION OF PRIOR APPLICATION IN WHICH LISTED INFORMATION WAS ALREADY CITED AND FOR WHICH NO COPIES ARE SUBMITTED OR NEED BE SUBMITTED

[ ] This application relies, under 35 U.S.C. 120, on the earlier filing date of prior application Serial No. \_\_\_\_\_ filed on \_\_\_\_\_.

5. COPIES OF LISTED INFORMATION ITEMS ACCOMPANYING THIS STATEMENT

US 6,319,651	US 6,251,562
US 4,491,628	US 4,910,122
US 5,350,660	US 5,635,333
US 4,863,827	US 5,882,996
US 5,939,236	US 6,110,653
US 5,886,102	US 6,319,651
US 6,080,530	US 6,054,254

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US 6,114,085  
US 5,652,297  
US 5,981,145  
US 6,187,506  
US 5,939,236  
US 5,935,760  
US 5,731,386  
US 5,880,169  
US 5,939,236  
US 5,354,643

US 5,716,756  
US 5,069,997  
US 5,585,219  
US 2004/0018451 A1  
EP 794,458 A2  
GB 2 320 178 A  
DE 39 30 086 A1  
DE 39 30 087 A1  
DE 41 12 967 A 1  
WO 97/33198

Yamaoka et al., "Photochemical Dissociation of p-Nitrobenzyl Aromatic Sulfonate and Its Application to Chemical Amplification Resists", *Journal of Photopolymer Science and Technology*, Vol. 3, No. 3 (1990), pp. 275 – pp. 280

Schlegel et al., "Studies on the Acid Formation and Deprotection Reaction by Novel Sulfonates in a Chemical Amplification Positive Photoresist", *Journal of Photopolymer & Science Technology*, Vol. 3, No. 3 (1990), pp. 281 – pp.287

Shirai et al., "Photochemistry of Imino Sulfonate Compounds and Their Application to Chemically Amplified Resists", *Journal of Photopolymer Science and Technology*, Vol. 3, No. 3 (1990), pp. 301 – pp. 304

*CRC Handbook of Chemistry & Physics*, "Dissociation Constants Of Organic Acids And Bases", CRC Press (1994-1995 75<sup>th</sup> Edition), pp. 8-45 – pp. 8-55

Moon et al., "Three-Component Photopolymers Based on Thermal Cross-Linking and Acidolytic De-Cross-Linking of Vinyl Ether Groups. Effects of Binder Polymers on Photopolymer Characteristics", *Chemical Materials*, Vol. 6 (1994), pp. 1854 – pp. 1860

Abstract of Houlihan et al., "Chemically amplified resists. The chemistry and lithographic characteristics of nitrobenzyl benzenesulfonate derivatives", *Journal of Photopolymer & Science Technology*, Vol. 3, pp. 259 – pp. 273 (1990)

Abstract of Yamaoka et al., "Reactions of vinyl ethers and application to photoreactive process", *Trends in Photochemistry & Photobiology*, Vol. 7, pp. 45 – pp. 70 (2001)

Abstract of Schacht et al., "Acid labile crosslinked units: a concept for improved positive deep-UV photoresists", *ACS Symposium Series*, 706, pp. 78 – pp. 94 (1998)

Legible copies of all items listed accompany this information statement except as noted herein.

☐ Items in prior application from which an earlier filing date is claimed for this application as identified in No. 4 above.

6. TRANSLATION(S) OF NON-ENGLISH LANGUAGE DOCUMENTS

☐ Submitted herewith is an English language abstract of the following foreign language patents, publications or information or of those portions of those patents, publications or information considered to be material:

☐ No English language translations of the foreign language patents, publications or information or parts thereof are readily available, except those listed above.

☐ The following foreign language documents submitted are believed to be the equivalent or substantial equivalent of the English language documents identified below, which are also submitted herewith:

Pursuant to the Official Gazette notice of 5 August 2003, 1276 O.G. 55, since this application entered the National Stage under 35 USC 371 after June 30, 2003, applicant is not enclosing copies of the above mentioned U.S. patents and/or U.S. patent publications.

8. IDENTIFICATION OF PERSON(S) MAKING THIS INFORMATION DISCLOSURE STATEMENT

The person making this statement is the attorney who signs below on the basis of the information in the attorney's file.

Respectfully submitted:



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Attorney for Applicant(s)

Sangya Jain

(Reg. No. 38, 504)

70 Meister Avenue

Somerville, New Jersey 08876

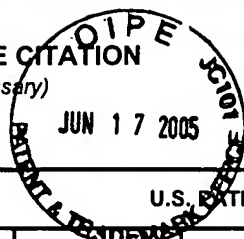
Telephone: (908) 429-3536

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Customer No. 26,289

# INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)



ATTY DOCKET NO.

2004US301

APPLICATION NO.

10/808,884

APPLICANT(S)

Yu SUI et al.

FILING DATE

March 25, 2004

GROUP ART UNIT

1756

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6,319,651 B1	11/20/2001	Holmes et al.			
	4,491,628	01/01/1985	Ito et al.			
	5,350,660	09/27/1994	Urano et al.			
	4,863,827	09/05/1989	Jain et al.			
	5,939,236	08/17/1999	Pavelchek et al.			

## U.S. PATENT APPLICATION PUBLICATIONS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	2004/0018451 A1	01/29/2004	Choi			

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	EP 0 794 458 A2	09/10/1997	EUROPE				
	GB 2 320 718 A	07/01/1998	GREAT BRITAIN				
	DE 30 30 086 A1	03/21/1991	GERMANY				
	DE 39 30 087 A1	03/14/1991	GERMANY				
	DE 41 12 967 A1	10/22/1992	GERMANY				

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

		Yamaoka et al., "Photochemical Dissociation of p-Nitrobenzyl Aromatic Sulfonate and Its Application to Chemical Amplification Resists", <i>Journal of Photopolymer Science and Technology</i> , Vol. 3, No. 3 (1990), pp. 275 - pp. 280
		Schlegel et al., "Studies on the Acid Formation and Deprotection Reaction by Novel Sulfonates in a Chemical Amplification Positive Photoresist", <i>Journal of Photopolymer &amp; Science Technology</i> , Vol. 3, No. 3 (1990), pp. 281 - pp.287

EXAMINER	DATE CONSIDERED
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	5,886,102	03/23/1999	Sinta et al.			
	6,110,653	08/29/2000	Holmes et al.			
	6,080,530	06/27/2000	Shao et al.			
	6,251,562 B1	06/26/2001	Breyta et al.			
	4,910,122	3/20/1990	Arnold et al.			

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						YES	NO
	WO 97/33198	09/12/1997	WIPO				

## **OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

Shirai et al., "Photochemistry of Imino Sulfonate Compounds and Their Application to Chemically Amplified Resists", *Journal of Photopolymer Science and Technology*, Vol. 3, No. 3 (1990), pp. 301 - pp. 304

*CRC Handbook of Chemistry & Physics*, "Dissociation Constants Of Organic Acids And Bases", CRC Press (1994-1995 75th Edition), pp. 8-45 - pp. 8-55

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	5,635,333	06/03/1997	Petersen et al.			
	5,882,996	06/16/1999	Dai			
	6,319,651 B1	11/20/2001	Holmes, et al.			
	6,054,254	04/25/2000	Sato et al.			
	6,114,085	09/05/2000	Padmanaban et al.			

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		Moon et al., "Three-Component Photopolymers Based on Thermal Cross-Linking and Acidolytic De-Cross-Linking of Vinyl Ether Groups. Effects of Binder Polymers on Photopolymer Characteristics, <i>Chemical Materials</i> , Vol. 6 (1994), pp. 1854 - pp. 1860
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		5,652,297	07/29/1997	McCulloch et al.			
		5,981,145	11/09/1999	Ding et al.			
		6,187,506 B1	02/13/2004	Ding et al.			
		5,939,236	08/17/1999	Pavelchek et al.			
		5,935,760	08/10/1999	Shao et al.			

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	5,731,386	03/24/1998	Thackeray et al.			
	5,880,169	03/09/1999	Osawa et al.			
	5,354,643	10/11/1994	Cabrera et al.			
	5,716,756	02/10/1998	Pawlowski et al.			
	5,069,997	12/03/1991	Schwalm et al.			

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	5,585,219	12/17/1996	Kaimoto et al.			

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